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PEST ALERT

Florida Department of Agriculture and Consumer Services, Division of Plant Industry
Charles H. Bronson, Commissioner of Agriculture

A peach fruit fly, *Bactrocera zonata* (Saunders) (Tephritidae)

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INTRODUCTION: A peach fruit fly, *Bactrocera zonata* (Saunders) (Tephritidae), was captured in a fruit fly detection trap on 10 November 2010 in the Homestead area of Miami-Dade County. This is the first time that this species has been found in Florida. See Figures 1 and 2.

DISTRIBUTION: Widespread in south Asia from Pakistan, India and Sri Lanka to southeast Asian countries such as Thailand, Laos, Vietnam and Indonesia. Introduced and established in the Arabian peninsula since at least 1982, well-established in Egypt since the late 1990s, also present on the Indian Ocean island of Mauritius. Detected numerous times in California since 1984, and as recently as August 2010, but not established there.

HOST PLANTS: Recorded hosts include common guava (*Psidium guajava*), mango (*Mangifera indica*), peach (*Prunus persica*), sugar apple (*Annona squamosa*), apple (*Malus domestica*), bitter gourd (*Momordica charantia*), date palm (*Phoenix dactylifera*), okra (*Abelmoschus exculentus*), papaya (*Carica papaya*), paradise apple (*Malus pumila*), pomegranate (*Punica granatus*), quince (*Cydonia oblonga*), sweet orange (*Citrus sinensis*), and tropical almond (*Terminalia cattapa*) (Butani 1976, Grewal & Halhi 1987, Syed et al. 1970 [all from White and Elson-Harris 1992]). Other host plants are likely.

ECONOMIC IMPACT: In India, the pest status of *B. zonata* is considered equal to or greater than that of the Oriental fruit fly (*Bactrocera dorsalis*) and the melon fly (*B. cucurbitae*), and they may overlap in the same crop. This pest is active throughout much of the year (Kapoor 1993).

ADULT IDENTIFICATION: The wing color pattern comprises only a small dark spot near the wing tip that is reduced from the pattern seen in the otherwise similar Oriental fruit fly (*B. dorsalis*), which has a complete costal band and anal streak that overlays the basal cubital wing cell. The Asian guava fruit fly, *Bactrocera correcta*, has a nearly identical wing pattern, but the colors of the thorax are notably darker, not the red-brown seen in *zonata*. See Figure 3.

ATTRACTANT: Males are attracted to methyl eugenol. Detection of this and many other fruit flies depends on a widespread grid of baited traps in areas where introductions are likely to occur. Once a fly is detected, the trapping density is greatly increased for several square miles around the detection point. If further flies are detected, an eradication program may be implemented. As methyl eugenol is such a powerful attractant, an insecticide is added to the bait and flies are quickly annihilated.

FLORIDA DISTRIBUTION: Not yet known to occur.

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Figure 1. Dorsal view of peach fruit fly, *Bactrocera zonata*, specimen from Punjab, India

Figure 2. Actual specimen of peach fruit fly, *Bactrocera zonata,* recovered from Miami-Dade County fruit fly trap

Figure 3. Asian guava fruit fly, *Bactrocera correcta*, on left; peach fruit fly, *Bactrocera zonata,* on right

Photographs courtesy of Gary Steck, DPI

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